

c.) Remarks:

The claims are 81-85, 89-96, 98 and 99 with claims 81 and 93 being independent. Claims 86 and 87 have now been cancelled without disclaimer or prejudice. The claims have been amended to better define the intended invention and reconsideration thereof is respectfully requested.

The recited objections to Claims 86 and 87 have been rendered moot by cancellation of these claims.

The claims were deemed unpatentable over the primary references to Ohta, or Quate, alone, or in view of the secondary references to Akamine, Fillard, Jain or Watanabe for the grounds set forth on pages 3-9 of the outstanding action. The grounds of rejection are respectfully traversed.

Prior to addressing the grounds of rejection, Applicants wish to briefly review certain key features and advantages of the present claimed invention.

In the present invention, a surface light emitting device has therein both a light source and a protrusion which receives the light and projects it from the surface. This feature eliminates coupling losses found in the prior art as shown in the Prior Art Figure 2 which is similar to Ohta. See also page 3, lines 4-13.

Ohta et al ('790) discloses a probe unit with a silicon substrate 101 and an opening through the silicon substrate 102, through which an optical fiber 103 having a core 104 and cladding 105 round the core 104 is fitted and fixed. Additionally, Ohta discloses an optically-transparent conical probe 108 on the insulating film 106 which closes the opening 102. Light is lead into the probe 108 through the optical fiber 103 and is irradiated as evanescent light from the probe 108 through the aperture 110. See Figures 2-6, 7H and 8H of Ohta '790.

Applicants have taught that by guiding light through an optical fiber, as in Ohta, coupling loss is likely to occur (see page 3, lines 8-11 in the specification). To overcome this defect, Applicants employ a surface light emitting device where light is produced in the device and fed to the tip without a conduit, as used in Ohta.

Quate '190 discloses in Figures 2A and 7A, as recited in Col. 4, lines 10-32, and Col. 5, lines 7-15, that an external waveguide 23 controlled by light switch 27 controls the flow of light to tip 25. See also Col. 1, lines 56-64. No surface light emitting device is provided which has therein both an open protrusion and a light source. As shown in Quate, Figure 7A, a large waveguide 70 has a large collimating lens 71 and microlenses 72 with smaller waveguides 73, light switches 74 and waveguides 75 to direct light to cantilever 20. In Col. 5, lines 42-52, it is disclosed that light is introduced by (an external) laser diode or other suitable laser or light source. As noted at Col. 5, lines 60-65 of Quate, an array of laser diodes 72 or other suitable lasers or light sources is positioned adjacent wafer 24 to direct laser beams into the waveguides. See Figures 7B and 7C.

The defects of Ohta ('790) and Quate ('190) are not remedied by Fillard ('856) or Jain ('706). Fillard '856 in Figures 7A, 7B and 8 show a photodiode 225 or optical beam 302 which is used in conjunction with the probe tip 221. Fillard fails to teach or suggest a surface light emitting device, such as a semiconductor laser.

Jain ('706) neither teaches nor suggests a surface emitting light device with an opening portion and a light source to supply light to the opening. Additionally, Watanabe does not remedy the defects of the above cited references. Watanabe fails to teach a surface emitting laser device having the opening and light supply claimed.

Accordingly, the Applicants submit that none of the references, whether considered alone or combined, discloses or suggests the present claimed invention nor

renders it unpatentable. It is respectfully requested that the claims be allowed and that the case be passed to issue.

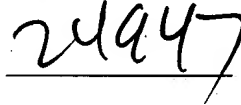
Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,



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